

ABSTRACT

A pressure control system for controlling the pressure of a process fluid stream at a certain location, comprising: a pressure regulator disposed in the process fluid stream, through which the process fluid stream flows; a first pilot controller adapted to sense the pressure of the process fluid at the said location and receive a control pressure from a control source; a second pilot controller adapted to receive same control pressure from the control source and provide added pressure; an inspirator adapted to receive the added pressure from the second pilot controller and generate a differential pressure; wherein the differential pressure is used to control the pressure of the process fluid stream within the pressure regulator. The pressure regulator comprises a first chamber and a second chamber therein separated by a flexible element and a divider is disposed in the first chamber and operative to abut against the flexible element to divide the first chamber into separate spaces. Preferably, the pressure regulator is disposed such that the flexible element extends substantially in vertical direction and the divider extends substantially in horizontal direction.